Gowanus Canal
New York
EPA ID#: NYN000206222

EPA REGION 2
Congressional District(s): 08,11,12
Kings
End of 5th Street

NPL LISTING HISTORY
Proposed Date: 4/9/2009
Final Date: 3/4/2010

Site Description

The Gowanus Canal is a 100-foot wide,1.8-mile long canal located in the New York City borough of Brooklyn, Kings County, New York. Connected to Gowanus Bay in Upper New York Bay, the canal borders several residential neighborhoods including Gowanus, Park Slope, Cobble Hill, Carroll Gardens, and Red Hook. The adjacent waterfront is primarily commercial and industrial, currently consisting of concrete plants, warehouses, and parking lots. There are five east-west bridge crossings over the canal, located at Union Street, Carroll Street, Third Street, Ninth Street, and Hamilton Avenue. The Gowanus Expressway and the IND Culver Line of the New York City Subway, an aboveground section of the original Independent Subway System, pass overhead.

The Gowanus Canal was built to allow access for industrial needs by bulkheading and dredging a tidal creek and wetland that had previously been fished for oysters. After its completion in the 1860s, the canal quickly became one of the nation’s busiest industrial waterways, home to heavy industry including gas works (i.e., manufactured gas plants), coal yards, cement makers, soap makers, tanneries, paint and ink factories, machine shops, chemical plants, and oil refineries. It was also the repository of untreated industrial wastes, raw sewage, and surface water runoff for decades, causing it to become one of New York’s most polluted waterways. Although much of the industrial activity along the canal has stopped, high contaminant levels remain in the sediments. Despite the ongoing pollution problems, some city dwellers currently use the Gowanus Canal for recreational purposes, such as canoeing and diving, while others catch fish for consumption.

The City built a "Flushing Tunnel" in 1911to replace the stagnant water in the canal with fresh, oxygen-rich water that would improve water quality. The tunnel worked until the 1960s, when mechanical failure caused it to shut down and the canal became polluted and stagnant again. The city's Department of Environmental Protection subsequently restored the Flushing Tunnel. The tunnel operates 24 hours a day, seven days a week, bringing fresh water into the canal.

The canal is part of the New York-New Jersey Estuary, which EPA has designated an Estuary of National Significance.

Threat and Contaminants

Numerous sampling events have shown the sediments in the Gowanus Canal to be contaminated with a variety of pollutants, including polycyclic aromatic hydrocarbons (PAHs), volatile organic contaminants (VOCs), polychlorinated biphenyls (PCBs), pesticides, and metals. PAH concentrations were found to be as high as 45,000 milligrams per kilogram (4.5%) and the contamination was found to traverse the entire length of the canal. Many of the detected contaminants are known carcinogens. The contaminated sediments pose an immediate risk to the fishery located just downstream of the canal in Gowanus Bay. This fishery is well documented, and fish caught there are used as food.

Cleanup Approach

The site wil be addressed in one stage—a long-term remedial phase focusing on the cleanup of the entire site.

Response Action Status

The Canal has been heavily contaminated throughout its existence. No environmental remediation has been undertaken to date.

EPA is performing field work to determine the full extent of the contamination in the Canal and to calculate the human and ecological risks associated with that contamination. This work builds on previous studies that have been carried out

by the U.S. Army Corps of Engineers and National Grid, a potentially responsible party (PRP). A bathymetric (underwater depth) study was performed in early January 2010. Deep sediment sampling activities commenced on January 27, 2010. Surface sediment, surface water, air, and groundwater samples will also be collected. Sampling activities will continue until late summer 2010.

It is anticipated that the remedial investigation report will be completed by December 2010 and that the risk assessments will be completed in early 2011.

Subsequently, a feasibility study (FS) will be prepared. The FS will identify and evaluate cleanup alternatives to address contamination in the Canal. The FS is expected to be completed in late 2011. It is anticipated that EPA will select a remedy to address the contamination in the Canal in 2012.

PRP-performed efforts are currently underway, under New York State authorities, at three former Manufactured Gas Plants (MGPs) located along the Gowanus Canal, which are believed to be sources of much of the Polyaromatic hydrocarbon (PAH) contamination in the canal--the former Fulton MGP site; Former Citizens Gas Works MGP site (a.k.a. Carroll Gardens/Public Place); and former Metropolitan Gas Light Company MGP site. National Grid is the PRP for the MGP sites.

EPA has identified several PRPs and is actively searching for additional PRPs. Notice and information request letters have been sent to a number of parties, including New York City and NationalGrid. EPA is currently negotiating Administrative Orders on Consent with New York City and NationalGrid to perform investigatory work at their respective sites.

Cleanup Progress

Investigatory work is underway at the Canal and the former Fulton MGP and Former Citizens Gas Works MGP and contaminated soils have been removed from the former Metropolitan Gas Light Company MGP.

Site Repositories

EPA Region 2 Superfund Records Center, 290 Broadway, 18th Floor, New York, NY 10007-1866